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DEPARTMENT OF
HEALTH AND ENVIRONMENTAL SCIENCES

STAN STEPHENS, GOVERNOR

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STATE OF MONTANA

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Solid and Hazardous Waste Bureau
(406) 444-1430

MEMORANDUM

TO: Interested Parties

FROM: Mark Hall

DATE: April 19, 1991

SUBJECT: NOTICE OF ISSUANCE OF A DRAFT CLOSURE/POST-CLOSURE PERMIT FOR CENEX REFINERY IN LAUREL, MONTANA, MTHWP-91-01

The Department has issued a draft closure/post-closure permit for the Cenex refinery in Laurel, Montana. The permit will be public noticed on April 21, 1991. Enclosed is a fact sheet which summarizes the proposed requirements.

Please contact me if you have any questions.

STATE DOCUMENTS COLLECTION

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PLEASE RETURN

FACT SHEET
FOR A HAZARDOUS WASTE MANAGEMENT FACILITY PERMIT
FARMERS UNION CENTRAL EXCHANGE/CENEX REFINERY
LAUREL, MONTANA
EPA ID. NO. MTD006238083

The Environmental Protection Agency, Region VIII (EPA) and the Montana Department of Health and Environmental Sciences (MHDES) intend to issue a hazardous waste management permit under Title 75, Chapter 10, Part 4 of the Montana Hazardous Waste and Underground Storage Tank Act (MSHWUSTA) and the Resource Conservation and Recovery Act (RCRA) to Cenex for the closure and post-closure care of a land treatment unit located at the refinery in Laurel and for the provisions of the Hazardous and Solid Waste Amendments of 1984 (HSWA). The State of Montana is authorized to administer and enforce those portions of RCRA in effect prior to the enactment of HSWA. EPA retains authority for HSWA regulations. This fact sheet was prepared in accordance with the requirements of 40 Code of Federal Regulations (C.F.R.) 124.8 and Administrative Rules of Montana (ARM) 16.44.904.

PURPOSE OF THE PERMIT ISSUANCE PROCESS

The purpose of the permit issuance process is to allow MDHES, EPA, other governmental agencies, and interested citizens the opportunity to evaluate the ability of the Permittee to comply with the applicable requirements promulgated under RCRA, as amended by HSWA. The draft permit sets forth all the applicable requirements with which the EPA and MDHES intend to require the Permittee to comply during the duration of the permit. The public is given forty-five (45) days to review and comment on the draft permit conditions prior to EPA and MDHES taking any final action on the draft permit.

FACILITY DESCRIPTION

The CENEX Refinery is located in Yellowstone County, Laurel, Montana. The refinery has existed at this location since 1930. The major products produced at the Cenex refinery are gasoline, diesel fuel, heating oils, asphalt, asphalt emulsions, deasphalted pitch, and propane.

HAZARDOUS WASTE ACTIVITIES

A thirty acre land treatment area was used from 1964 to November, 1988 for the treatment and disposal of a mixture of refinery sludges and leaded tank bottoms, all listed as hazardous wastes by the MDHES. The location of the unit is shown in Figure 1. Approximately 5,520 tons of waste were placed on the land treatment unit during its active lifetime. Land treatment, or landfarming, is a waste management practice in which soils receiving the waste are tilled and fertilized while microorganisms degrade the waste to a less hazardous form. Land treatment has been employed successfully for many years by the petroleum and chemical industries. In 1984, the State of Montana was authorized by EPA to regulate the land treatment of hazardous wastes.

In November, 1984, Congress amended RCRA. The new amendments required operators of hazardous waste management units regulated under RCRA to submit an application

for a final operating permit (Part B permit) or to close the unit. If hazardous wastes or hazardous waste constituents remain at the facility at closure, post-closure maintenance and groundwater monitoring are required for up to thirty years. These activities must be covered by a permit issued by MDHES. During the process of preparing a Part B permit application, Cenex discovered the presence of hazardous waste constituents at a depth of greater than five feet in the land treatment unit and elected to close the unit and send its hazardous waste to an off-site permitted treatment facility. Because of the presence of hazardous wastes in the landfarm, Cenex is required to have a Closure/Post-Closure permit which will specify the requirements and appropriate procedures for closing and monitoring the land treatment unit.

Remediation and Closure of the Land Treatment Unit

Under RCRA regulations, a hazardous waste management unit must be closed in a manner that:

(1) Minimizes the need for further maintenance, and

(2) Controls, minimizes, or eliminates to the extent necessary to protect human health and the environment, post-closure escape of hazardous waste, hazardous constituents, leachate, contaminated run-off, or hazardous wastes decomposition products to the ground or surface waters or to the atmosphere.

The draft permit calls for the excavation of wastes and hazardous constituents which have migrated too deeply into the soil to be degraded. These contaminated soils will be placed on the surface of portions of the land treatment unit to allow for degradation to occur. The draft permit requires the continued operation of the land treatment unit for a period of up to five years. No new wastes may be added to the land treatment unit. Management practices are to be followed to provide optimum conditions for biological and chemical degradation, transformation, or immobilization of the hazardous constituents present in the waste. The management practices include tillage, and nutrient, pH, and moisture control. When soil samples taken from the unit indicate that hazardous constituents have degraded to either non-detection or to the maximum extent possible, the unit will be seeded with grass. Post-closure care may be required for up to thirty years.

Cenex currently operates a groundwater monitoring program at the unit which has shown the release of hazardous waste constituents. RCRA regulations require corrective action for releases of hazardous constituents to groundwater from hazardous waste management units. The draft permit requires Cenex to submit a groundwater corrective action plan by January 1, 1992. MDHES will review the plan and request changes if necessary. MDHES will then prepare a draft permit modification to incorporate the plan into the permit. Additional public comment will be sought at that time.

Post-Closure Care of the Land Treatment Unit

Maintenance and monitoring of hazardous waste management units are required for a period of thirty years after closure. The draft permit establishes requirements for such maintenance and monitoring and includes maintenance of the vegetative cover, precipitaion run-on and run-off structures, groundwater and unsaturated zone monitoring. The draft permit also includes inspection schedules.

The MDHES contact person for the RCRA portion of the permit is:
Rosemary Rowe
Department of Health and Environmental Sciences
Solid and Hazrdous Waste Bureau
Cogswell Building
Helena, MT 59620
(406) 444-1430

HAZARDOUS AND SOLID WASTE AMENDMENTS

One of the most important provisions of the Hazardous and Solid Waste Amendments of 1984 is the requirement for corrective action for continuing releases of hazardous waste or constituents from solid waste management units. Solid waste management units (SWMUs) are any active or inactive units at the facility from which hazardous waste or hazardous waste constituents might migrate, irrespective of when waste was placed in the unit or whether that unit was intended for the management of solid and/or hazardous wastes. This provision is established in Section 3004(u) of RCRA and can be found in the regulations at 40 C.F.R. 264.101.

Congress established a requirement that all hazardous waste permits must address environmental contamination. All permit applicants must now (a) identify all solid waste management units (SWMUs) at the facility, (b) identify any releases that have occurred or are occurring from those units, (c) take appropriate corrective action to clean up those releases, and (d) demonstrate financial assurance for those corrective actions.

As part of the HSWA permit, EPA Region VIII proposes to regulate SWMUs at Cenex subject to the corrective action provisions of HSWA. EPA Region VIII has completed a preliminary evaluation of the SWMUs at the facility. Sixty-two SWMUs and 11 areas of concern were defined during this process. Included in the 62 SWMUs are 28 active units and 34 inactive units. The names and identifying numbers of the SWMUs and areas of concern are given in Table 1. Figure 2 illustrates the approximate locations of the SWMU's at the facility.

The basic standard for imposing corrective action at the Cenex Refinery is protection of human health and the environment. Module VI of the permit will address corrective action when there is or has been a probable release at the facility that poses a threat to human health and the environment. A substantial threat to human health and the environment is assumed if there is a likelihood of a hazardous waste or hazardous

TABLE 1.

Solid Waste Management Units
Cenex Laurel Refinery

Unit Number	Unit Name
Active SWMUs:	
1	Hydrocyclone
2	23 Tank
3	44 Tank
4	Pilkenroad Tilted Plate Separators
5	API Separator
6	Dissolved Air Flotation Unit
7	Sludge Pit
8	Separation Towers
9	Clarifier
10	Sour Water Stripper
11	Wastewater Retention Pond System
12	Sputnik
13	HF Neutralization Pits
14	Old Landfill
15	Pitch Waste Area
16	Asphalt Waste Area
17	FCC Catalyst Waste Area
18	Hot Process Lime Softener Waste Area
19	Calcium Fluoride Disposal Area 1
20	Half-Drum Storage Area and Reclaimer
21	Asbestos Waste Tanks
22	Wood Burn Area
23	Pitch and Asphaltic Material Reclaimer
24	Spent Caustic Recycler Tank
25	Heat Exchanger Cleaning Pad
26	Spent Lime Sludge Tank
27	Scrap and Drum Area
28	Miscellaneous Waste Area 3
Inactive SWMUs	
29	Calcium Fluoride Disposal Area 2
30	Old Landfill Area 2
31	Leaded Tank Bottom Trench
32	Asphaltic Material Trenches 1
33	Spent Lime Sludge Trenches
34	Asphaltic Material and Spent Lime Sludge Disposal Area
35	New Land Farm (RCRA-regulated unit)
36	Old Land Farm (RCRA-regulated unit)

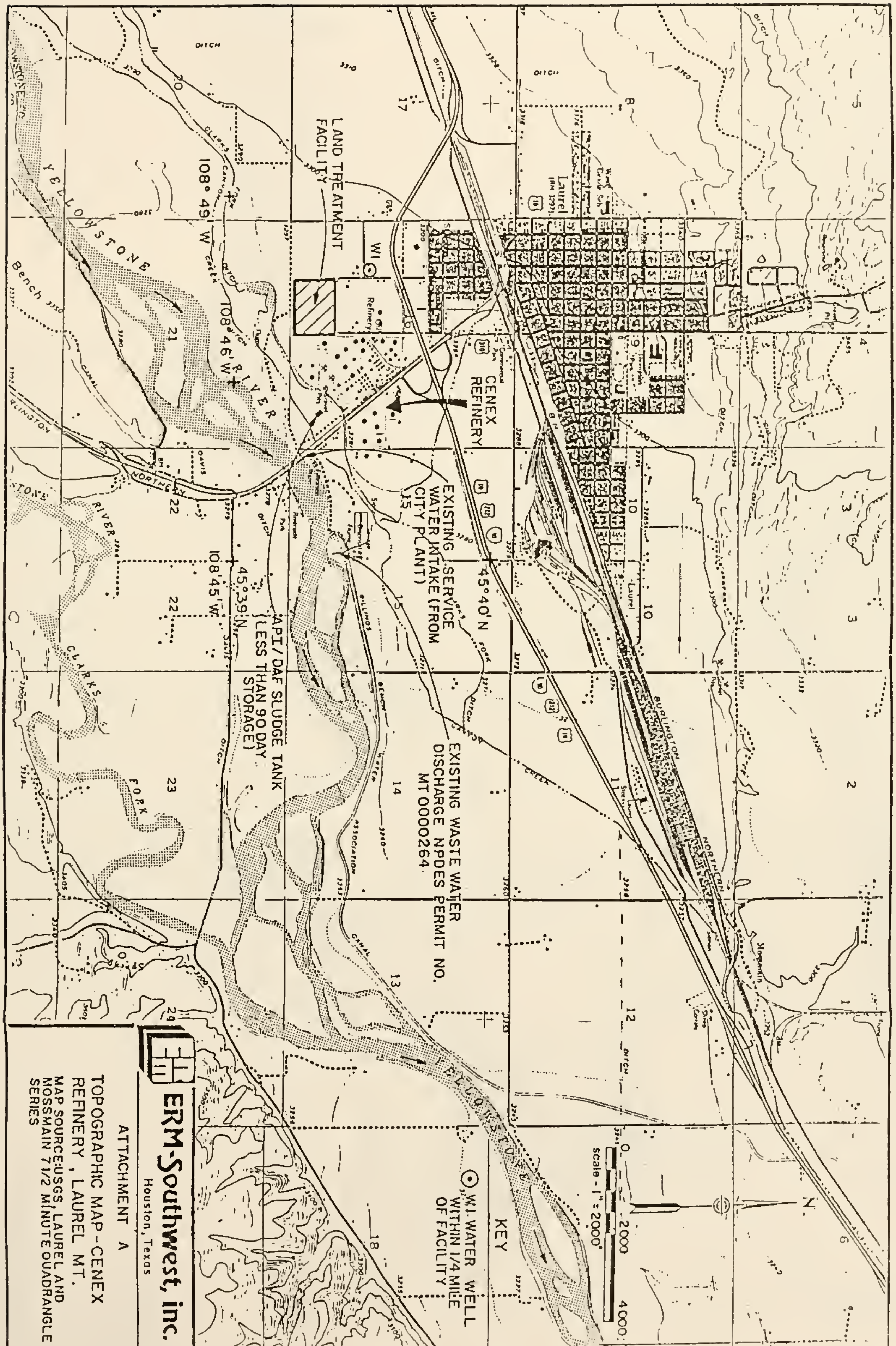
36A	Dike K052 Area (RCRA-regulated unit)
36B	Asphaltic Material Trenches 2
36C	Asphaltic Material and Misc. Sludges 1
36D	Asphaltic Material and Misc. Sludges 2
36E	Scrap Metal Trenches
36F	Scrap Storage Area
36G	Alumina and Dryer Sieves Disposal Areas
37	Leaded Tank Bottom Storage Area
38	Reclaimer
39	Container Storage Area
40	Asphaltic Barrel Disposal Area
41	Asbestos Waste Disposal Area
42	Garbage Disposal Area
43	Asphaltic Material Disposal Area
44	Cooling Tower Sludge Trench
45	Cooling Tower Sludge and Garbage
46	Asbestos Trench
47	Caustic Material Pit
48	Reclaimer
49	Asphalt Container Storage Area
50	Old API Separator Area
51	Scrap Disposal Area
52	Burn Pit
53	Burn Pit Disposal Area
54	"Smokeless" Incinerator Site
55	Treatment Pond Sludge Disposal Area
56	Clarifier and Spent Lime Sludge Disposal Area
57	Asphaltic Material/Lagoon Area
58	Drum Storage/Disposal Areas
59	Wastewater Impoundment Area
60	South Liquid Waste Pits
61	Land Application Area
62	Disturbed Area

Areas of Concern

1	Clarks Fork Ditch
2	Cycle Oil Loading Rack
3	Hot Oil Belt Heater Unit
4	Sulfur Recovery Unit
5	Mobile Storage Tank
6	Underground Storage Tanks (UST-regulated units)
7	Tank Truck Unloading Area
8	Tank Car Loading Rack
9	Covered Drain Ditch
10	Refinery Sewer System
11	Oil on Ground Water

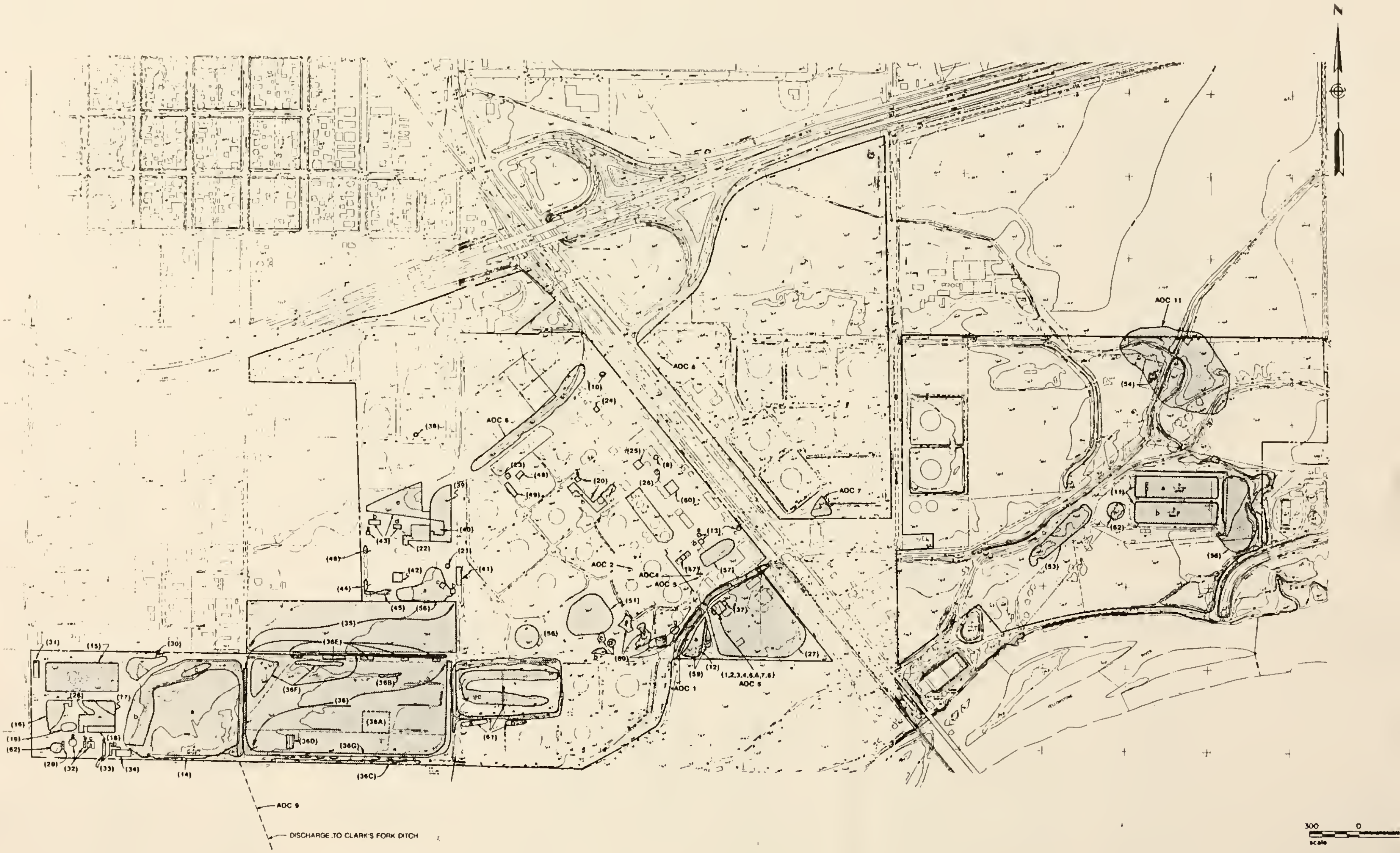
(RCRA-regulated unit = regulated by state Hazardous Waste Program)
(UST-regulated unit = regulated by state Underground Storage Tank Program)

Figure 1.


LAND TREATMENT FACILITY
WI
Refinery
CENEX REFINERY
EXISTING SERVICE WATER INTAKE (FROM CITY PLANT)
45°40'N
108°49'W
108°46'W
108°45'W
45°39'N
API/DAF SLUDGE TANK (LESS THAN 90 DAY STORAGE)
EXISTING WASTE WATER DISCHARGE NPDES PERMIT NO. MT 0000264
YELLOWSTONE RIVER
CLARKS FORK
BURLINGTON NORTHERN
Laurel
KEY
W.I. WATER WELL WITHIN 1/4 MILE OF FACILITY
scale - 1" = 2000'
0
2000
4000
N

ERM-Southwest, inc.
Houston, Texas

ATTACHMENT A
TOPOGRAPHIC MAP - CENEX REFINERY, LAUREL MT.
MAP SOURCE: USGS, LAUREL AND MOSSMAIN 7 1/2 MINUTE QUADRANGLE SERIES



WASTE UNITS AND AREAS OF CONCERN
OUTSIDE OF THE FACILITY
CENEX REFINERY
LAUREL, MONTANA

ERM-Southwest, Inc.

HOUSTON

constituent release from a solid waste management unit into the air, surface water, groundwater, or soil.

Implementation

The HSWA permit requires Cenex to do the following:

(1) Prepare a workplan for investigating the solid waste management units at the refinery. This workplan must outline tasks designed to determine the nature and extent of contaminant releases and the potential pathways along which contaminants may migrate.

(2) Conduct site investigations according to the workplan.

(3) Report to EPA on the results of the investigations.

(4) Prepare a plan, conduct studies and report to EPA on corrective measures which may be needed to respond to releases identified at the facility.

(5) Conduct interim measures, as necessary, to address any unit which poses a current threat, or potential threat, to human health or the environment.

If EPA finds that further studies and/or corrective measures are warranted, EPA will propose a permit modification and follow appropriate procedures which will include a public notice period and a public hearing, if requested.

Other HSWA Provisions

A number of other provisions in HSWA became effective November 8, 1984. Five other provisions, in addition to those pertaining to corrective actions for continuing releases, apply to this permit.

Section 3005(h) of RCRA requires that, as of September 1, 1985, Permittees of hazardous waste management facilities must certify that certain waste minimization practices have been established. This requirement has been incorporated into regulations at 40 C.F.R. 264.73(b)(9).

Sections 3004(d),(e),(f),(g), and (m) of RCRA prohibit the land disposal of hazardous wastes unless it has been demonstrated to EPA that, to a reasonable degree of certainty, that there will be no migration of hazardous constituents from the disposal unit for as long as the wastes remain hazardous, or the waste

has first been treated to certain standards. These requirements have been incorporated into regulations at 40 C.F.R. 268.

Section 3004(n) of RCRA required EPA to develop regulations for the monitoring and control of air emissions at hazardous waste treatment, storage and disposal facilities. These regulations were promulgated on June 21, 1990 under 40 C.F.R. 264, Subpart AA.

Sections 3001(g) and (h) of RCRA required EPA to examine and revise the Extraction Procedure toxicity characteristic (one of four existing characteristics used to identify those wastes defined as hazardous and subject to regulation). Accordingly, revisions to 40 C.F.R. Part 261.24 were promulgated on March 29, 1990. These revisions revised the test method, added 25 organic chemicals to the list of toxic constituents of concern, and established regulatory levels for these organic chemicals.

Finally, Section 3001(e)(2) of RCRA directed EPA to make a decision on whether to list as hazardous a number of refining wastes. On November 2, 1990, EPA promulgated regulations listing two refinery wastes as hazardous. These wastes, designated F037 and F038, are generated in the separation of oil/water/solids from petroleum refinery process wastewaters and oily cooling wastewaters. These listings were incorporated into regulation at 40 C.F.R. 261.31.

The EPA contact person for the HSWA portion of the draft permit is:

Stephanie Wallace
U.S. Environmental Protection Agency
Montana Office
301 S. Park, Drawer 10096
Helena, Montana 59626
(406)449-5414

PROCEDURES FOR REACHING A FINAL DECISION

ARM 16.44.905, Section 7004(b) of RCRA and 40 C.F.R. 124.10 require that the public be given forty-five (45) days to comment on each draft permit prepared under the Resource Conservation and Recovery Act. The comment period for the Cenex permit will begin on April 21, 1991 and will end on June 4, 1991. Any person interested in commenting on this draft permit must do so within this forty-five (45) day comment period.

The draft permit will be available for review at the following locations: Solid and Hazardous Waste Bureau, 836 Front Street, Helena, MT 59620, 444-1430; Montana Department of Health and Environmental Sciences, Third Floor, Petro Building, Eastern Montana College, Box 108, Billing, Montana 59101-0298, 657-2616; and the Laurel Public Library, 720 West Third St, Laurel, Montana, 59044, 628-4961. A copy of the permit, as well as all data submitted to EPA by CENEX, is also available for

review at: USEPA, Federal Building, 301 S. Park, Helena, MT 59601 between the hours of 8:00 a.m. and 4:00 p.m., Monday through Friday, phone (406) 449-5414.

All persons wishing to comment on any of the permit conditions should submit the comments in writing to the Department of Health and Environmental Sciences, Solid and Hazardous Waste Bureau, Cogswell Building, Helena, MT 59601. Comments should include all reasonably available references, factual grounds and supporting material.

A public hearing will be held at the Laurel City Hall in Laurel, Montana on Wednesday, May 22, 1991 at 7:00 pm to receive comments on the draft permit.

When MDHES and EPA make a final permit decision to either issue, deny or modify this permit, notice will be given to the applicant and each person who submitted written comments or requested notice of the final decision. The final permit decision shall become effective thirty (30) days after the service of notice of the decision unless a later date is specified or review is requested under 40 C.F.R. 124.19 and/or ARM 16.44.911. If no comments requested a change in this draft permit, the final permit shall become effective immediately upon issuance.

Comments and/or questions should be addressed to Rosemary Rowe, Solid and Hazardous Waste Bureau, Cogswell Building, Helena, Montana 59620, phone 444-1430.